

Whither the Face?

Impact of Menopause on Facial Attractiveness

Janek S. Lobmaier & Andrina Kuster

University of Bern, Institute of Psychology

Research Questions

- Does menopause affect women's facial appearance?
- Does the drop of reproductive hormones (e.g., estradiol) during menopause affect women's attractiveness?

Introduction

- There is accumulating evidence suggesting an association between levels of reproductive hormones (especially E) and a woman's attractiveness ⁽¹⁾.
- Hormone markers such as full lips, small chin and meek facial bones are an honest signal to fertility and health ⁽²⁾
- A dramatic change in endogenous hormone levels occurs during menopause when production of estradiol and progesterone falls to a very low level

Methods

Stimuli

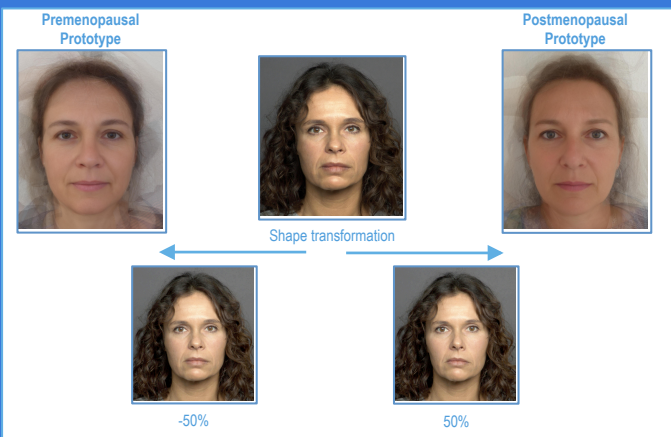
Portraits of 16 women (8 pre-menopausal, 8 post-menopausal).
No exogenous hormones (e.g., hormonal contraception, HRT)

All women provided saliva samples from which we assessed E, P, T, and Cort

Pre-menopausal prototype: 8 women, mean age 48.5; *SD* = 2.11

Post-menopausal prototype: 8 women, mean age 51.6; *SD* = 0.91

20 new faces ⁽³⁾ (mean age 50.3; *SD* = 2.94) were shape-transformed in 50% steps towards each prototype.



Participants

- 20 men, aged between 38 and 59 years (*M* = 51.5, *SD* = 5.51)
 - 18 partnered, 2 single
 - 10 partnered with post-menopausal women

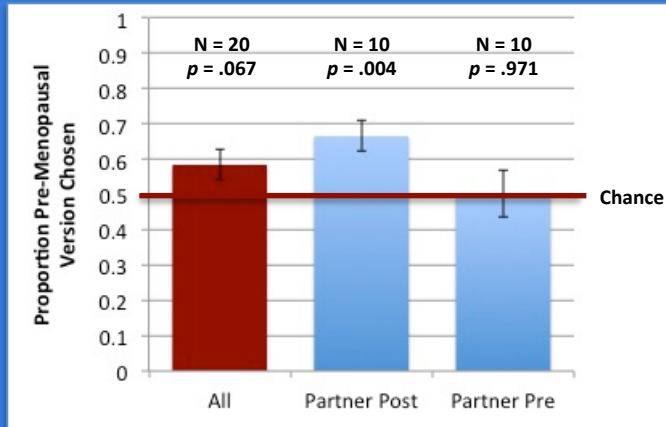
Task

- Pre- and post-menopausal versions of each woman were presented side by side (40 trials, order randomized)
- 2AFC-Task: "Which of these faces looks more attractive?"

Conclusions

- Preliminary evidence that women become slightly less attractive after going through menopause
- Experience with post-menopausal women is necessary to detect these changes.

Results



One-sample T-Tests against chance level (0.5):

Whole sample (*N* = 20): *t* = 1.942, *p* = .067 (two-sided)

Men with post-menopausal partner (*N* = 10):

t = 1.942, *p* = .067 (two-sided)

Men without post-menopausal partner (*N* = 10):

t = 0.037, *p* = .971 (two-sided)

Hormone Assays

	E (pg/ml)	P (pg/ml)	T (pg/ml)	Cort (nmol/l)
Pre-menopause Mean (SD)	3.084 (1.19)	12.106 (18.01)	6.783 (4.02)	2.841 (2.228)
Post-menopause Mean (SD)	2.507 (1.91)	66.671 (65.38)	8.64 (5.03)	3.910 (1.707)

Discussion

- Men found pre-menopausal versions of women's faces more attractive than their post-menopausal counterparts.
- Interestingly, we found a significant preference for pre-menopausal faces particularly for men who have partners who already went through menopause.
- Men with pre-menopausal partners showed no preference for either face.
 - ➔ Experience with facial changes during menopause is necessary to detect these changes.
- What makes post-menopausal faces less attractive? Hormonal changes? Age confound?

References

- Law Smith, M.J., et al. (2006). Facial appearance is a cue to oestrogen levels in women. *Proc. Biol. Sci.* 273, 135–140
- Grammer, K., et al. (2003). Darwinian aesthetics: sexual selection and the biology of beauty. *Biological Reviews*, 78, 385–407
- Ebner, N.C., Riediger, M., & Lindenberger, U. (2010). FACES - A database of facial expressions in young, middle-aged and older women and men: Development and Validation. *Behavior Research Methods*, 42, 351–362.